SIPRNET Design for MCA

Basic Guidance on SIPRNET Design for MCA Projects

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U.S. Army Information Systems Engineering Command
Fort Detrick Engineering Directorate (ISEC FDED)

ISEC: Excellence in Engineering

Introduction

- SIPRNET requirements now considered as common user, in limited quantities and environments
- Standardized designs under development
- Cooperative efforts to determine numbers and methods for these design efforts
- Need to engineer within regulations and policies.

Technical Guides

- Technical Guide for the Integration of Secret Internet Protocol Router Network (SIPRNET), Version 4.1, May 2007
- Technical Guide for the Installation Information Infrastructure Architecture, March 2006
- Both are available on AKO:
  - Files➔US Army Organizations➔ AMC➔ CECOM➔ CECOM ISEC FDED
  - Before clicking on CECOM ISEC FDED, please register to receive automatic notification of updates.
  - Within this folder, you will see several folders - one contains the I3A Tech Guide and one the SIPRNET Tech Guide and Cost Estimates.

Policies and Regulations

Primary Resources

- *** NSTISSI 7003, Protected Distribution Systems (PDS), 13 Dec 96
- *** NSTISSAM TEMPEST 2/95, Red/Black Installation Guide, 12 Dec 95
- *** NSTISSAM TEMPEST 2/95A, Amendment to TEMPEST 2/95, 03 Feb 00
- *** AR 380-5, Department of Army Information Security Program, 29 Sep 00
- AR 25-1, Army Knowledge Management and Information Technology, 15 Jul 05
- AR 25-2, Information Assurance, 14 Nov 03
- AR 415-15, Army Military Construction and Nonappropriated-Funded Construction Program Development and Execution, 12 Jun 06

MCA Guidelines

- Centrally-funded effort beginning in FY08.
- MCA reviews (by ISEC) will include design of SIPRNET connectivity.
  - Imperative to have ISEC review of comm design
  - Different PDS requirements for UAA and CAA
- CIO/G6 and PM DCASS have contributed to the development of SIPRNET profiles.

SIPRNET Guidelines

- 25% of the building population will get SIPRNET drops:
  - Each private office will get one drop
  - The remainder will be placed in one or more SIPRNET Cafés
  - SIPRNET drops are not recommended in cubical areas, even if it is a Controlled Access Area (CAA).

Protected Distribution System

- General guidelines:
  - All PDS designs for classified communications must be reviewed / approved by the CTTA (IAW HQDA G2 memo and AR 25-2)
  - IAW NSTISSI 7003 PDS will not be designed for installation:
    - Inside/behind the walls
    - Above the ceiling
    - Under the floor
  - Primary SIPRNET communications room will:
    - Be designed IAW AR 380-5 standards for a secure communications room
  - Secondary communications areas will:
    - Be included in the comm room / closet for the unclassified system

Protected Distribution System

- Uncontrolled Access Area (UAA)
  - Hardened PDS must be:
    - Ferrous metal conduit or raceway (including all fittings and connectors)
    - Installed on the wall (recommended 6” from ceiling)
    - Undergo daily inspection (IAW NSTISSI 7003)
- Controlled Access Area (CAA)
  - Simple PDS must be:
    - Metal, plastic, or any other material
    - Installed on the wall (recommended 6” from ceiling)
    - Undergo inspection (IAW tables in NSTISSI 7003)

SIPRNET Buildings

- Some facilities, structures, or buildings will NOT get SIPRNET drops during the initial construction.
- The designs for all other buildings will be considered for SIPRNET drops (25% rule).
  - Those with current need will be designed for PDS, cable, and electronics.
  - Those with possible future need will be designed for PDS and cable only.

SIPRNET Buildings

- For SIPRNET buildings with 10 or more drops, a TACLANE solution will be recommended.
  - The current TACLANE is the Micro from GD.
- For SIPRNET buildings with less than 10 drops, Individual Mobile Encryptors (IME) will be used.
  - An example of an IME is a TALON card.
  - No PDS will be required.

SIPRNET Buildings (w/TACLANE)

CAT CODE	SUB CAT	DESCRIPTION OF CATEGORY	SIPRNET ROMT	PDS REO'D	ENCRYPTION DEVICE (IME or TACLANE)	COMMENTS
131		Communications (Information Systems) Buildings	Y	Y	TACLANE	
133		Aviation Navigation and Traffic Aids Bldgs	Y	Y	TACLANE	
137		Ship Navigation and Traffic Aids Buildings	Y	Y	TACLANE	
141		Operational Buildings	Y	Y	TACLANE	
142		Helium Plants and Storage	Y	Y	TACLANE	
143		Ship Operational Buildings	Y	Y	TACLANE	
156		Cargo Handling Facilities and/or Buildings	Y	Y	TACLANE	
171		Training Buildings	Y	Y	TACLANE	
172		Simulation Facilities	Y	Y	TACLANE	
178		Training Ranges	Y	Y	TACLANE	Drill down to only digital range facilities
179		Training Facilities Other Than Buildings	Y	Y	TACLANE	Drill down to only digital range facilities
211		Aircraft Maintenance Facilities	Y	Y	TACLANE	
212		Guided Missile Maintenance Facilities	Y	Y	TACLANE	
213		Ships and Spares Maintenance Facilities	Y	Y	TACLANE	
214		Tank and Automotive Maintenance Facilities	Y	Y	TACLANE	

SIPRNET Buildings (w/TACLANE)

CAT CODE	SUB CAT	DESCRIPTION OF CATEGORY	SIPRNET ROMT	PDS REO'D	ENCRYPTION DEVICE (IME or TACLANE)	COMMENTS
215		Weapons and Spares Maintenance Facilities	Y	Y	TACLANE	
216		Ammunition, Explosives, and Toxics Maintenance Facilities	Y	Y	TACLANE	
217		Electronics and Communications Equipment Maintenance Facilities	Y	Y	TACLANE	
218		Miscellaneous Items and Equipment Maintenance Facilities	Y	Y	TACLANE	
219		Installation, Repair, and Operations Maintenance Facilities	Y	Y	TACLANE	
221		Aircraft Production Facilities	Y	Y	TACLANE	
222		Guided Missiles Production Facilities	Y	Y	TACLANE	
224		Tank and Automotive Production Facilities	Y	Y	TACLANE	
225		Weapons and Spares Production Facilities	Y	Y	TACLANE	
226		Ammunition, Explosives, and Toxics Production Facilities	Y	Y	TACLANE	
228		Miscellaneous Items and Equipment Production Facilities	Y	Y	TACLANE	
229		Installation Maintenance and Repair Production Facilities	Y	Y	TACLANE	
310		Research, Development, Test, and Evaluation (RDT&E) Science Laboratories	Y	Y	TACLANE	

SIPRNET Buildings (w/TACLANE)

CAT CODE	SUB CAT	DESCRIPTION OF CATEGORY	SIPRNET ROMT	PDS REO'D	ENCRYPTION DEVICE (IME or TACLANE)	COMMENTS
311		Aircraft RDT&E Buildings	Y	Y	TACLANE	
312		Missile and Space RDT&E Buildings	Y	Y	TACLANE	
314		Tank and Automotive RDT&E Buildings	Y	Y	TACLANE	
315		Weapons and Weapons Systems RDT&E Buildings	Y	Y	TACLANE	
316		Ammunition, Explosives, and Toxics RDT&E Buildings	Y	Y	TACLANE	
317		Electronic and Communications Equipment RDT&E Buildings	Y	Y	TACLANE	
318		Propulsion RDT&E Buildings	Y	Y	TACLANE	
319		Miscellaneous Items and Equipment RDT&E Buildings	Y	Y	TACLANE	
321		Technical Services RDT&E Buildings	Y	Y	TACLANE	
371		RDT&E Range Facilities	Y	Y	TACLANE	
610		Administrative Buildings	Y	Y	TACLANE	
	61001	Military Entrance Processing Station (MEPS)	Y	Y	TACLANE	
	61050	Administrative Building, General Purpose	Y	Y	TACLANE	
620		Underground Administrative Structures	Y	Y	TACLANE	
	73015	Confinement Facility	Y	Y	TACLANE	Warden
	73016	Police/MP Station	Y	Y	TACLANE	MP

SIPRNET Buildings (w/IME)

CAT CODE	SUB CAT	DESCRIPTION OF CATEGORY	SIPRNET ROMT	PDS REO'D	ENCRYPTION DEVICE (IME or TACLANE)	COMMENTS
510		Medical Centers and Hospitals	Y	N	IME	1 Drop
550		Dispensaries and Clinics	Y	N	IME	1 Drop (If no hospital (under Cat 510))
	61002	Recruiting Station: Storefront	Y	N	IME	
	71111	Family Housing: General Officer	Y	N	IME	
	73017	Chapel	Y	N	IME	Chaplain
	74010	Auditorium, General Purpose	Y	N	IME	Deployment Purposes (IME or Roll-about)
	74028	Physical Fitness Center	Y	N	IME	Deployment Purposes (IME or Roll-about)
	74034	Community Activities Center	Y	N	IME	Deployment Purposes (IME or Roll-about)

Non-SIPRNET Buildings

CAT CODE	SUB CAT	DESCRIPTION OF CATEGORY
111		Airfield Runways
112		Airfield Taxiways
113		Airfield Aprons
116		Other Airfield Pavements
121		Aircraft Fuel Dispensing Facilities
122		Marine Fuel Dispensing Facilities
123		Land Vehicle Fuel Dispensing Facilities
124		Operating Fuel Storage Facilities
125		Petroleum, Oil, and Lubricant Pipeline
126		Other Liquid Fuel and Dispensing Facilities
132		Communications Facilities Other Than Buildings
134		Aviation Navigation and Traffic Aids Facilities Other Than Buildings
135		Communications Lines
136		Airfield (Heliport) Pavement Lighting
138		Ship Navigation and Traffic Aids Other Than Buildings

CAT CODE	SUB CAT	DESCRIPTION OF CATEGORY
149		Operational Support Facilities Other Than Buildings
151		Piers and Wharfs
154		Sea Walls, Bulkheads, and Quay Walls
155		Small Craft Berthing
159		Other Waterfront Operational Facilities
163		Moorings
164		Marine Improvements
177		Impact, Maneuver, and Training Areas
390		RDT&E Facilities Other Than Buildings
411		Bulk Liquid Fuel Storage
412		Liquid Storage Other Than Water, Fuel, and Propellants
421		Depot and Arsenal Ammunition Storage
422		Installation and Ready-Issue Ammunition Storage
423		Liquid Propellant Ammunition Storage
424		Weapon-Related Battery Storage
425		Open Ammunition Storage pad

Non-SIPRNET Buildings

CAT CODE	SUB CAT	DESCRIPTION OF CATEGORY
431		Depot and In-Transit Cold Storage
432		Installation and Ready Issue Cold Storage
441		Depot and Arsenal Covered Storage
442		Installation and Organizational Covered Storage
451		Depot Open Storage
452		Installation and Organizational Open Storage
530		Medical and Medical Support Facilities (Laboratories)
540		Dental Clinics
	61055	Waiting Area/In-Out Processing
	61065	Technical Library
	61070	Red Cross Building
	61075	Courtroom
690		Administrative Structures Other Than Buildings

CAT CODE	SUB CAT	DESCRIPTION OF CATEGORY
711		Family Housing: Dwellings
	71112	Family Housing, Colonel
	71113	Family Housing, LT Colonel and Major
	71114	Family Housing, Company Grade and Warrant Officer
	71115	Family Housing, Senior NCO
	71116	Family Housing, Junior NCO/Enlisted
	71117	Family Housing, Other Than Military
712		Family Housing: Trailers
713		Family Housing: Trailer Sites
714		Family Housing Support Facilities
720		Transient Housing
721		Enlisted Personnel Unaccompanied Personnel Housing
722		Unaccompanied Personnel Housing Mess Facilities
723		Detached Unaccompanied Personnel Housing Facilities
724		Officers Unaccompanied Personnel Housing

Non-SIPRNET Buildings

CAT CODE	SUB CAT	DESCRIPTION OF CATEGORY
725		Emergency Unaccompanied Personnel Housing
730		Personnel Support and Service Facilities
740		Indoor Morale, Welfare, and Recreation Facilities
750		Outdoor Morale, Welfare, and Recreation Facilities
760		Museums and Memorials
811		Electrical Power Source
812		Electrical Power Transmission and Distribution Lines
813		Electrical Power Substations and Switching Stations
821		Heat Source
822		Heat Transmission and Distribution Lines
823		Heating Gas Source
824		Heating Gas Transmission
826		Refrigeration (Air-Conditioning) Source
827		Chilled Water (Air-Conditioning) Transmission and Distribution Lines

CAT CODE	SUB CAT	DESCRIPTION OF CATEGORY
831		Sewage and Industrial Waste Treatment and Disposal
832		Sewage and Industrial Waste Collection Lines
833		Refuse and Garbage Facilities
834		Landfills
841		Potable Water Supply, Treatment, and Storage
842		Potable Water Distribution System
843		Fire Protection Water Facilities
844		Nonpotable Water Supply and Storage
845		Nonpotable Water Distribution System
846		Water Storage: Potable
847		Water Storage: Nonpotable
851		Roads
852		Sidewalks and Other Pavements
857		Training Area Roads
860		Railroad Tracks
861		Railroad Facilities Other Than Track
871		Grounds Drainage
872		Grounds Fencing, Gates, and Guard Towers

Non-SIPRNET Buildings

CAT CODE	SUB CAT	DESCRIPTION OF CATEGORY
880		Fire and Other Alarm Systems
881		Fire Extinguishing Systems
891		Miscellaneous Utilities Measured in Square Feet (SF)
892		Miscellaneous Utilities Measured in Each
893		Miscellaneous Utilities Measured in Linear Feet
894		Miscellaneous Utilities Measured in Cubic Feet Per Minute
895		Miscellaneous Utilities Measured in Gallons
911		Land Purchase, Condemnation, Donation, or Transfer
912		Public Domain Withdrawal
913		License or Permit
914		Public Land of Territories and Possessions
915		Land Purchase, Donation, or Transfer to State (National Guard Use Only)
921		Easements
922		In Lease

CATEGORY CODE	SUB CATEGORY	DESCRIPTION OF CATEGORY
923		Foreign Rights
932		Clearing, Grading, and Landscaping
933		Demolition of Facilities
934		Cut and Fill
940		Contaminated Facility or Area

Points of Contact

ISEC FDED
Tommie Lindsey,
tommie.lindsey@us.army.mil,
(301) 619-6461
Chris Shears,
chris.shears@us.army.mil,
(301) 619-6457
Tina Reed, tina.reed@us.army.mil,
(301) 619-6489
Kimberly Reed,
kimberly.reed@us.army.mil,
(301) 619-6414